

#### **IV. AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A homogenizer comprising a thrust hydrodynamic bearing ~~comprising: including~~ a fixed portion; and a disc-shaped agitation rotor that are opposingly arranged through in a face-to-face manner to define a predetermined bearing clearance between the facially-opposing fixed portion and the agitation rotor,

~~the thrust hydrodynamic bearing supporting a rotation of the agitation rotor with respect to the fixed portion,~~

wherein a plurality of mutually incompatible raw liquids are introduced into the bearing clearance to be mixed and agitated in the bearing clearance by a rotation of the agitation rotor.

2. (Original) A homogenizer according to claim 1, further comprising a plurality of grooves arranged radially or spirally along a circumferential direction on one surface of the agitation rotor which is opposed to the fixed portion.

3. (Original) A homogenizer according to claim 2, wherein the one surface of the agitation rotor which is opposed to the fixed portion is divided into three regions of a center circle region, an intermediate ring region, and an outer ring region,

the homogenizer further comprising: agitation grooves; spiral-shaped pumping grooves; and introduction ports for the plurality of raw liquids,

the agitation grooves being formed radially on any one of the three regions and extending in a diameter direction,

the pumping grooves being formed on the other two of the three regions for causing the plurality of raw liquids in the bearing clearance to flow into the agitation grooves by the rotation of the rotor,

the introduction ports being formed in the fixed portion at positions opposed to the pumping grooves of the agitation rotor.

4. (Currently Amended) A homogenizer according to any one of claims 1 to 3, further comprising a pressure release port, the pressure release port communicating with the bearing clearance and ~~connected with a relief valve~~ operative for adjusting a pressure in the bearing clearance.